AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below, with insertions indicated by underlining and deletions indicated by strikethrough and/or double bracketing.

1. (Currently amended) A method of manufacturing a photoelectric conversion device, comprising:

coating a transparent conductive substrate with a paste comprising a semiconductor fine grain and a binder made of a polymer compound;

sintering the paste at a temperature of between approximately 400 °C to 500 °C to form a semiconductor layer made of the semiconductor fine grain, the semiconductor layer comprising an organic substance; and

irradiating the semiconductor layer with ultraviolet rays for between approximately 4 and 70 hours to remove [[an]] at least some of the organic substance in said semiconductor layer using a photocatalyst effect of the semiconductor fine grain.

2. (Previously presented) The method of claim 1, wherein the semiconductor fine grain comprises a plurality of kinds of semiconductor fine grain exhibiting photocatalyst activity.

3. (Previously presented) The method of claim 1, wherein said semiconductor fine grain having a photocatalyst effect is made of titanium oxide, zinc oxide, or strontium titanate.

4. (Currently amended) The method of claim 1, wherein said polymer compound is a polymer compound having a viscosity improving effect.

5. (Previously presented) The method of claim 1, wherein said polymer compound is polyethylene glycol or polystyrene.

6. (Currently amended) ~~A photoelectric conversion device comprising:~~ The method of claim 1, wherein irradiating the semiconductor layer with ultraviolet rays for between approximately 4 and

70 hours comprises irradiating the [[a]] semiconductor layer with ultraviolet rays for between approximately 10 and 70 hours ~~made of semiconductor fine grain,~~

~~wherein the semiconductor fine grain is fused by sintering, and wherein the semiconductor fine grain comprises a plurality of types of semiconductor fine grain exhibiting photocatalyst behavior~~.

7. (Currently amended) ~~An apparatus comprising:~~ The method of claim 6, wherein irradiating the [[a]] semiconductor layer with ultraviolet rays for between approximately 10 and 70 hours comprises irradiating the semiconductor layer with ultraviolet rays for between approximately 30 and 70 hours ~~made of semiconductor fine grain and comprising less than approximately 1.4 atomic % of organic substances~~.

8. (Currently amended) The ~~apparatus~~ method of claim [[7]] 1, wherein irradiating the semiconductor layer with ultraviolet rays for between approximately 4 and 70 hours comprises irradiating the semiconductor layer with ultraviolet rays for a time sufficient to remove enough of the organic substance such that a content of a carbon component in said semiconductor layer after said irradiation by ultraviolet rays is equal to or less than 1 atomic %.

9. (Currently amended) The ~~apparatus~~ method of claim [[7]] 8, wherein irradiating the semiconductor layer with ultraviolet rays for between approximately 4 and 70 hours comprises irradiating the semiconductor layer with ultraviolet rays for a time sufficient to remove enough of the organic substance such that the [[a]] content of [[a]] the carbon component in said semiconductor layer after said irradiation by ultraviolet rays is equal to or less than 0.3 atomic %.

10. (Previously presented) A method of processing a semiconductor layer formed by sintering a paste coated on a substrate, the paste comprising a semiconductor fine grain and a binder made of a polymer compound, the method comprising:

irradiating the semiconductor layer with ultraviolet rays for approximately 70 hours.

11-12. (Cancelled)

13. (Currently amended) A method of manufacturing a semiconductor layer, comprising:

forming a paste comprising a semiconductor fine grain and a binder made of a polymer compound;

coating a substrate with the paste;

sintering the paste between approximately 400 °C and 500 °C, thereby forming the semiconductor layer comprising the semiconductor fine grain and an organic substance,

irradiating the semiconductor layer with ultraviolet rays for between approximately 4 and 70 hours to remove~~and~~, by using a photocatalyst effect of said semiconductor fine grain, ~~removing an~~ at least some of the organic substance in said semiconductor layer.

14-15. (Cancelled)

16. (Currently amended) The method of claim 1, wherein irradiating the semiconductor layer with ultraviolet rays for between approximately 4 hours and 70 hours comprises irradiating the semiconductor layer with ultraviolet rays for ~~up to~~ between approximately 50 and 70 hours.

17. (Previously presented) The method of claim 16, wherein irradiating the semiconductor layer with ultraviolet rays comprises irradiating the semiconductor layer with ultraviolet rays for approximately 70 hours.

18. (Previously presented) The method of claim 1, wherein sintering the paste at a temperature of between approximately 400 °C to 500 °C comprises sintering the paste for between approximately 30 minutes and one hour.

19. (Cancelled)

20. (New) A photoelectric conversion device produced according to the method of claim 8.

21. (New) A photoelectric conversion device produced according to the method of claim 9.

22. (New) A method of manufacturing a photoelectric conversion device, comprising:

coating a transparent conductive substrate with a paste comprising a semiconductor fine grain and a binder made of a polymer compound;

sintering the paste at a temperature of between approximately 400 °C to 500 °C to form a semiconductor layer made of the semiconductor fine grain; and

irradiating the semiconductor layer with ultraviolet rays in atmospheric conditions.

23. (New) The method of claim 22, wherein irradiating the semiconductor layer with ultraviolet rays comprises irradiating the semiconductor layer with ultraviolet rays for between approximately 4 and 70 hours.